

Mapesil 3D

100%-Silicone Sealant for Corner and Change-of-Plane Joints



DESCRIPTION

Mapesil® 3D is a professional-grade, 100%-silicone sealant for use on multiple substrates. This sealant is specifically formulated to offer direct color matches to MAPEI Flexcolor® 3D grout.

FEATURES AND BENEFITS

- Color-matched to MAPEI Flexcolor 3D grout
- Translucent sealant with “special effect” additives for an “iridescent effect” finish
- 100%-silicone for use in interior, exterior, wet and dry installations from Res 1 to 6 and Com 1 to 6 as detailed per TCNA Environmental Classifications
- Excellent elongation and flexibility for use in both change-of-plane and joint applications in tile or stonework
- Incorporates BioBlock® technology for mold and mildew resistance

INDUSTRY STANDARDS AND APPROVALS

- ASTM: Meets C920, Type S, Grade NS, Class 25, Use T2, NT, M, G, A and O, and conforms to C794 adhesion properties (#5201 Crystal Moon meets ASTM C920, Type S, Grade NS, Class 50, Use NT)
- TCNA: Meets EJ171 requirements for heavy traffic and expansion/movement joints

Green certifications

- Living Building Challenge (LBC) Red List Free: This product has been verified per the most current Red List on the LBC's Website.

WHERE TO USE

- Interior/exterior residential and commercial installations from Res 1 to 6 and Com 1 to 6 per TCNA Environmental Classifications
- As a flexible barrier/filler between horizontal/vertical surfaces and any other changes of plane
- Expansion joints in non-traffic, normal-traffic and heavy-traffic areas
- Countertops, vanities, sinks, bathtubs, showers, backsplashes and fixtures

LIMITATIONS

- Application temperature range is 40°F to 90°F (4°C to 32°C).
- *Mapesil 3D* may stain porous materials. Test a small area for staining or leaching before use to ensure compatibility with such porous materials as natural stone.
- *Mapesil 3D* should not be used in areas where material may come in contact with plasticizers or other materials that will prevent or diminish adhesion.
- Do not use *Mapesil 3D* for structural glazing.
- Not for use in expansion/movement joints with greater than 25% movement
- For joints with depths greater than 1/2" (12 mm), the caulking depth must be controlled by a closed-cell backer rod.
- Joint widths should not exceed 1" (2,5 cm).
- The joint width-to-depth ratio is 2 to 1, with a minimum depth of 1/4" (6 mm) and a maximum depth of 1/2" (12 mm).
- Although *Mapesil 3D* is color-matched to the *MAPEI Flexcolor 3D* grout color palette, expect a slight variation in color due to the difference in composition between materials.
- Not paintable; painting should be done before installation of *Mapesil 3D*.

SUITABLE SUBSTRATES

- *Mapesil 3D* adheres to most ceramic tile, porcelain, natural stone, glass, masonry, concrete, brick, wood, aluminum, fiberglass, vinyl, plastic, and properly prepared copper and brass.

Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

SURFACE PREPARATION

- Surfaces must be structurally sound, stable, dry, clean and free from dust, oil, grease, paint, gypsum patches, flooring adhesive, tar, wax, sealers, curing compounds, form release agents, laitance, loose particles and foreign substances that could reduce or impair adhesion.
- All installation areas should be thoroughly cleaned mechanically or with a solvent as necessary and be firmly set before caulking. Typically, this is done 24 to 48 hours after tile installation.
- Remove all traces of loose paint, loose particles, residue and cement particles by mechanical means.
- Remove mildew by scrubbing with a mixture of 4 U.S. oz. (118 mL) of trisodium phosphate (TSP), 1 U.S. qt. (946 mL) of liquid bleach and 3 U.S. qts. (2,84 L) of warm water. Protect eyes and hands by wearing goggles

and water/chemical-resistant gloves. Thoroughly rinse and allow the surface to dry completely before caulking.

- Vacuum out joints and wipe them clean with a damp rag.

See the “Surface preparation requirements” reference guide in the Tile & Stone Installation Systems section of MAPEI’s Website.

MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

- *Mapesil 3D* comes ready to use.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Caulking should take place after grout in the installation area has set.
2. For a clean, straight and neat sealant joint, mask both sides of the joint with masking tape.
3. Do not open the *Mapesil 3D* cartridge until preparatory work has been completed. Cut nozzle tip to the desired bead size at a 45-degree angle.
4. It will be necessary to insert a sharp tool (such as a screwdriver) inside the nozzle tip to puncture the protective aluminum foil seal inside the cartridge.
5. Apply *Mapesil 3D* with a caulking gun using steady, even pressure to completely bridge joints. Completely fill joints with sealant.
6. Tool the sealant using a “jointing tool” (or the back of a spoon dipped in a solution of soapy water) to create a concave joint shape with a neat appearance.
7. Immediately after tooling the sealant, remove masking tape and wipe off any sealant from the face of the veneer with a paper towel before the material skins over. If the material skins over, excess sealant may need to be removed before it cures by using a commercial solvent.
8. Cured sealant will require mechanical means to remove.

PROTECTION

- Protect the installation area from traffic or water for at least 24 hours at 73°F (23°C).
- Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Product Performance Properties

Laboratory Tests	Results
VOCs (Rule #1168 of California’s SCAQMD)	40 g per L
Slump (ASTM C639)	None
Tack-free time (ASTM C679)	20 to 25 minutes
Shore “A” hardness (ASTM C661)	18 to 20
Joint movement (ASTM C920)	+/-25%

Elongation at break (ASTM D412)	410%
Weatherability (Accelerated Weathering Tester QUV)	No change after 10,000 hours: Passes
Flexibility (ASTM C734)	Excellent: Passes at -15°F (-26°C)
Freeze/thaw stability: 0°F/77°F (-18°C/25°C) at 24 hours or ASTM C731	Passes 5 cycles

Shelf Life

18 months when stored in original, unopened packaging at 73°F (23°C) and 50% relative humidity
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Application Properties

at 73°F (23°C) and 50% relative humidity

Tooling time	5 to 10 minutes
Full cure	28 days depending on ambient temperature, substrate temperature and humidity
Service temperature range	-60°F to 400°F (-51°C to 204°C)

Packaging

Size
Cartridge: 10.1 U.S. oz. (299 mL)

ADDITIONAL INFORMATION

Refer to the SDS for specific data related to health and safety as well as product handling.

For information on MAPEI’s commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA) or sustainability-durabilite@mapei.com (Canada).

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

CONTACT INFORMATION

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Customer Service

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For the most current product data and BEST-BACKEDSM warranty information,
visit www.mapei.com.

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